Village of Baltimore
Fairfield County

103 West Market Street
Baltimore, Ohio 43105

Phone: 740-862-4491
Fax: 740-862-4368

E-Mail: twise@baltimoreohio.org

Bradley S. Nicodemus
Mayor

Teri Wise
Village Administrator

Kathryn E. Jenkins
Fiscal Officer

Jeffrey Feyko
Village Solicitor

DATE: March 1, 2017

OBJECTIVE: (House Bill 512) Lead Contamination in Drinking Water, Mapping

HISTORY: Baltimore's Public Water System was originally built in 1936. Since its existence, the village has made many additions and improvements. The Baltimore Water System has historically not used lead service lines.

SUPPLY SOURCE-GROUNDWATER: Baltimore's water system depended on ground water wells as a source of water supply, and the present water supply system utilizes three wells with a combined capacity of 2.5 MGD.

TREATMENT WORKS: The treatment plant process includes: Iron Removal, Pressure filter filtration with Green Sand Plus media, pre and post chlorination, Ion exchange filtration, which the most recent upgrade was finished in May of 2016.

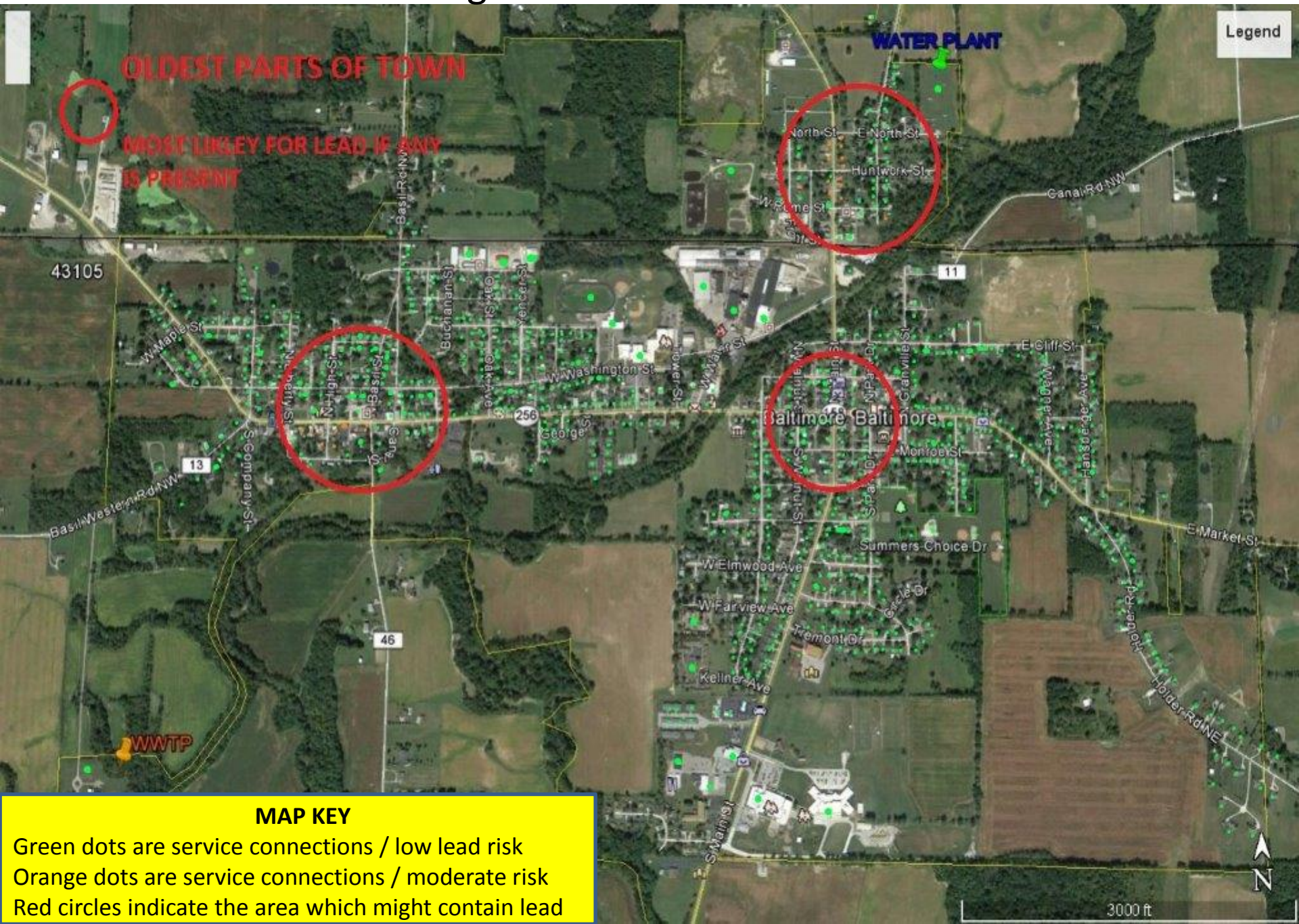
DISTRIBUTION SYSTEM: The water distribution system consists of one 400,000 galion elevated storage tower, and one 500,000 galion ground storage tank, totaling 900,000 gallons of stored capacity. The remaining system is made up of approximately 20 miles of main lines ranging in size from 2" – 12" in diameter, and includes 150 fire hydrants. All distribution main lines are comprised of either: AC or Cast/ Ductile Iron material. All water service lines are Type "K" Copper tubing or High Density Polyethylene tubing.

INDENTIFYING CHARACTORISTICS OF STRUCTURES CONTAINING LEAD:
Since each structure cannot be confirmed to contain Lead, the probability is greater considering the structure age. Baltimore's drinking water system provides service to approximately: 1350- Residential Users, 4- Industrial Users, and 15- Commercial Users. Some of these structures were built prior to the Lead ban.

Our findings and information is not only based on the age and history of structure but also though reviewing original ordinances, tap and maintenance records, and service/meter installations. In 2016 the public was asked for their assistance in providing any information to the Village if they suspect their service line is a lead pipe or have any lead fixtures. They were asked to contact the Village water distribution system department head.

The Baltimore Water System is currently in compliance with Ohio and United States Environmental Protection Agency regulations.

Village of Baltimore



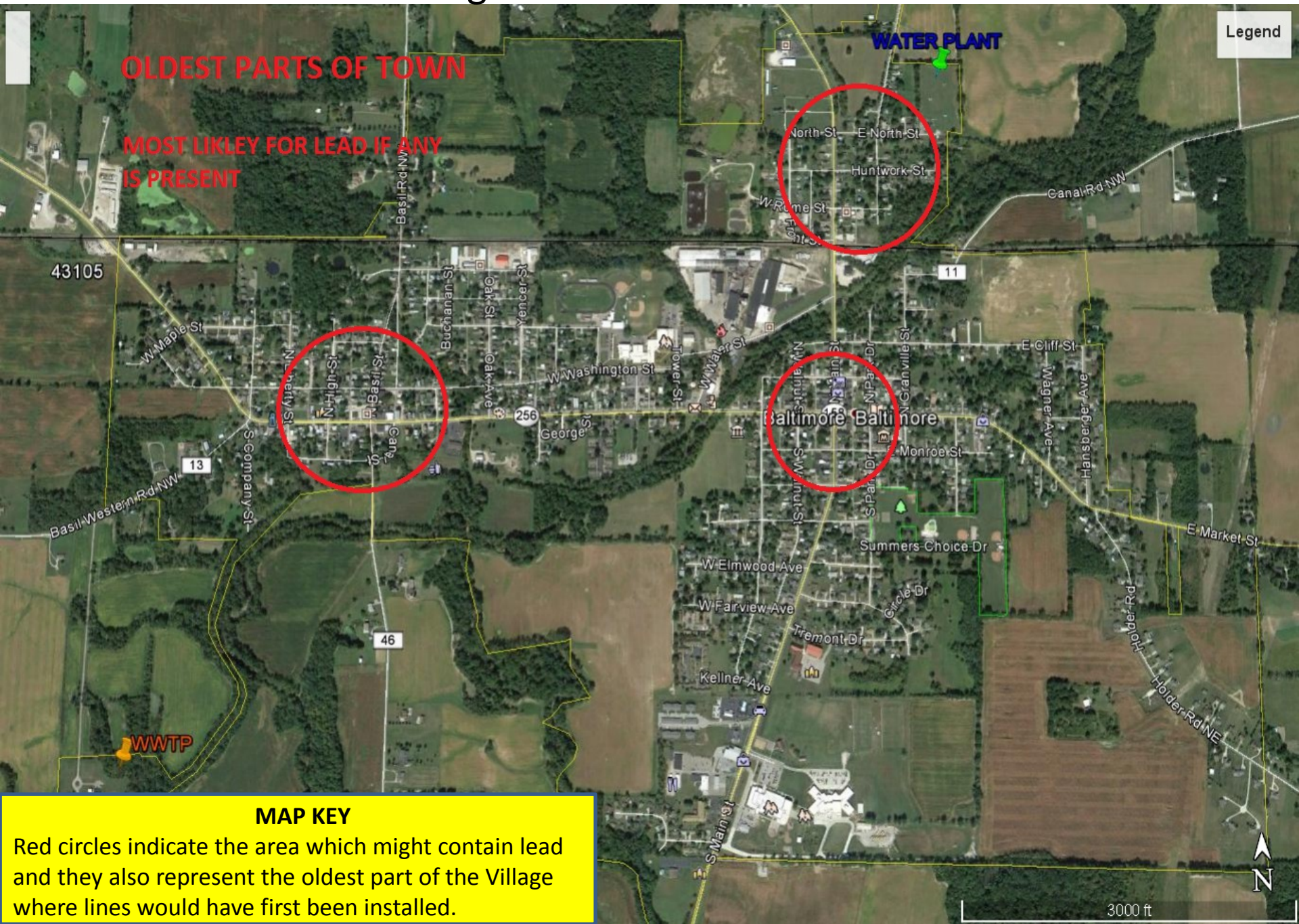
MAP KEY

Green dots are service connections / low lead risk

Orange dots are service connections / moderate risk

Red circles indicate the area which might contain lead

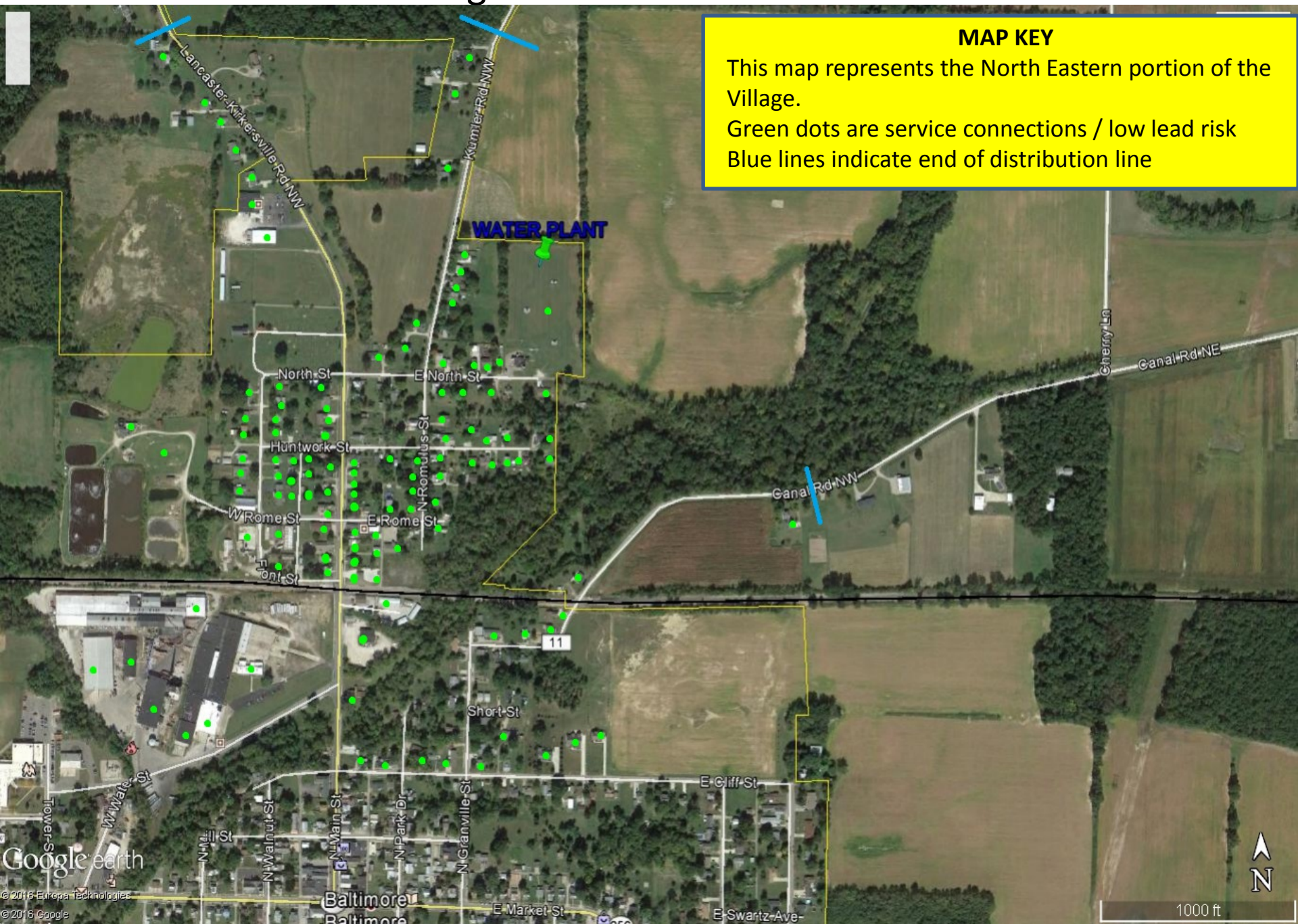
Village of Baltimore



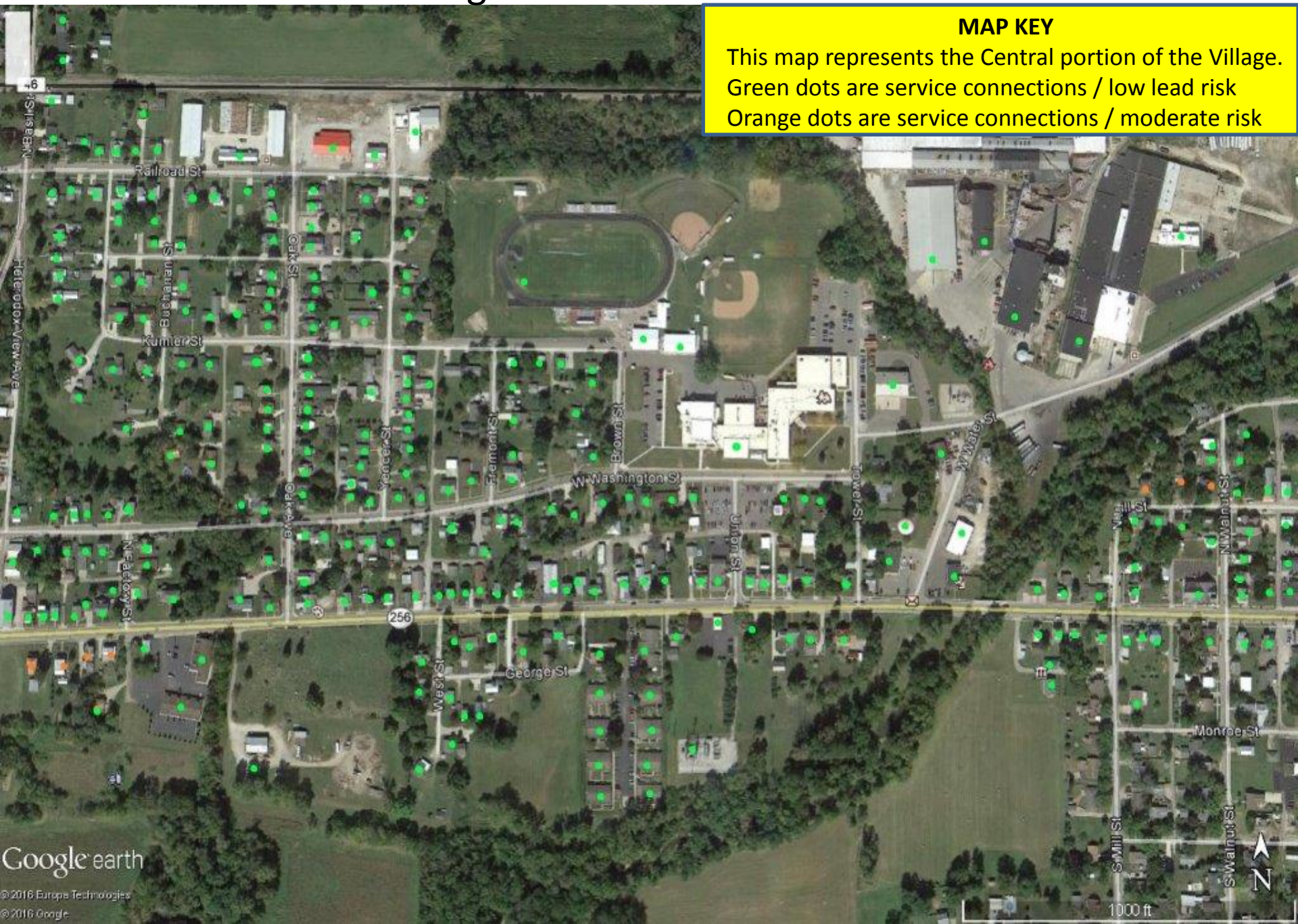
MAP KEY

Red circles indicate the area which might contain lead and they also represent the oldest part of the Village where lines would have first been installed.

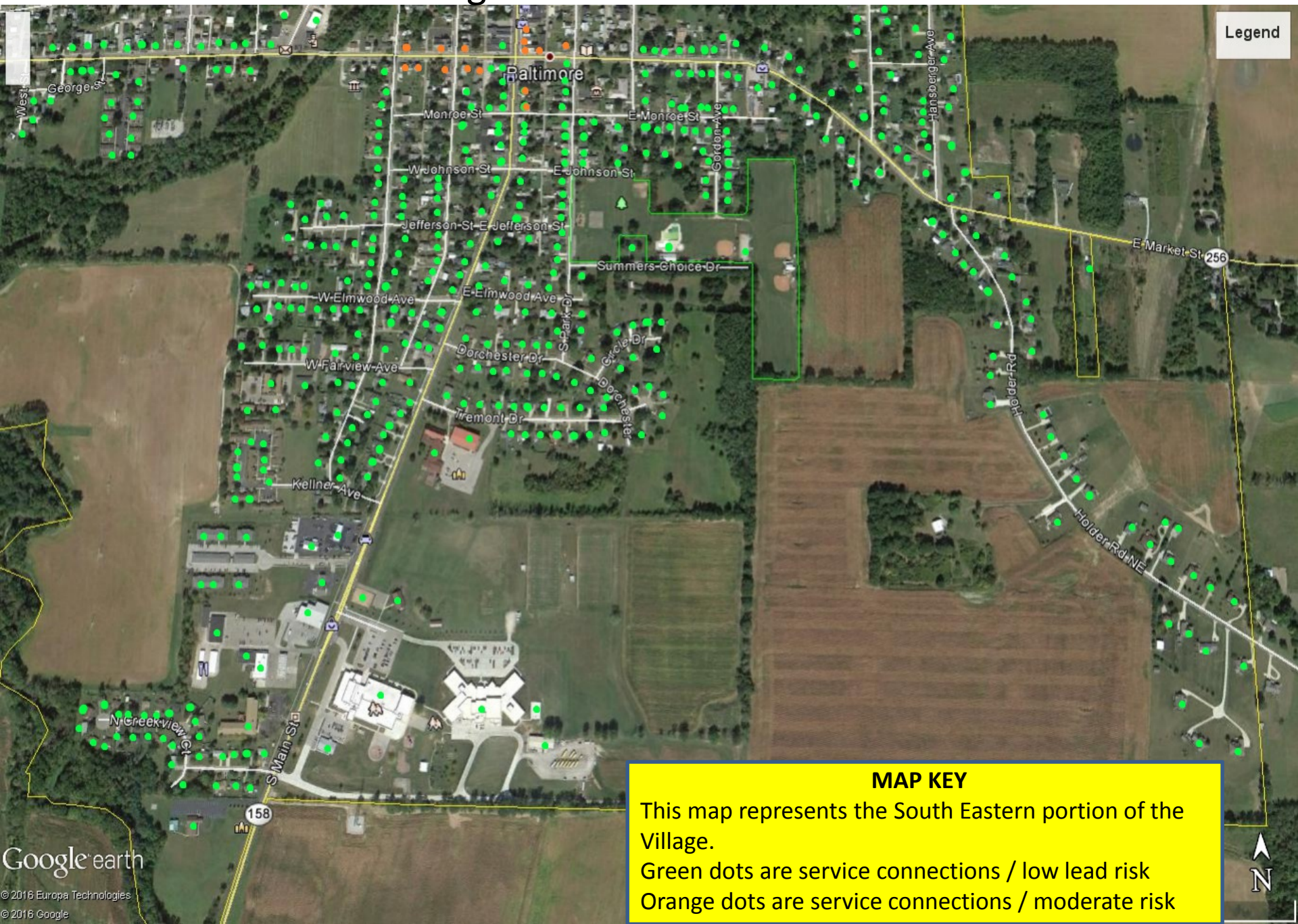
Village of Baltimore



Village of Baltimore



Village of Baltimore



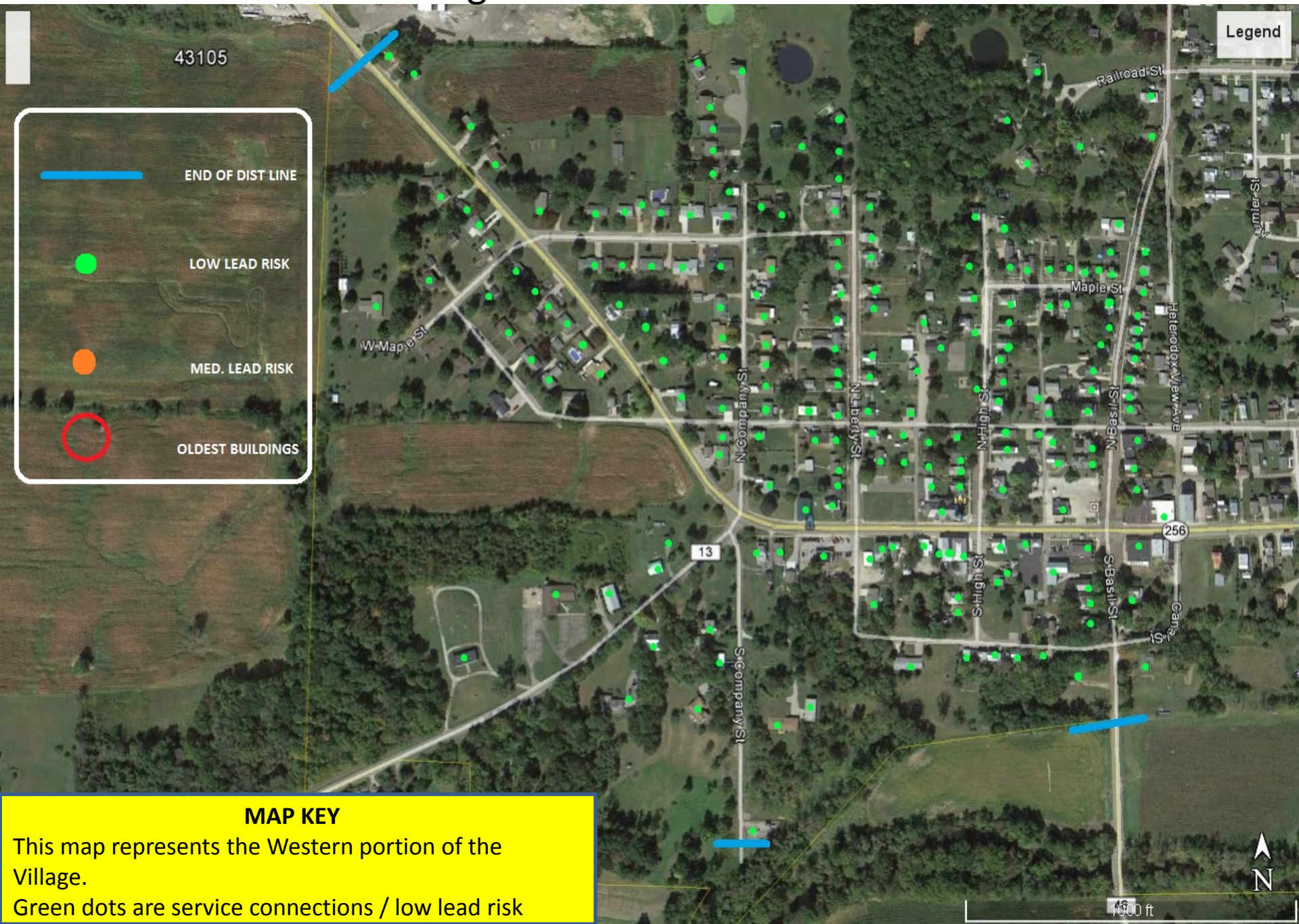
MAP KEY

This map represents the South Eastern portion of the Village.

Green dots are service connections / low lead risk

Orange dots are service connections / moderate risk

Village of Baltimore



MAP KEY

This map represents the Western portion of the Village.

Green dots are service connections / low lead risk

that lead could have been used for service line materials unless the age of the area or specific information exists to rule out lead.

V. IDENTIFYING CHARACTERISTICS OF BUILDINGS WITH LEAD PIPING, SOLDER OR FIXTURES

In 1986, the SDWA was amended to ban the use of lead solders which contain more than 0.2% lead. The lead ban provisions of the act became effective in Ohio Plumbing Code on March 30, 1998. The SDWA amendments also required the use of lead-free flux, pipes and fittings in new installations and repairs of public water systems, or any plumbing within a residential or nonresidential facility which provides water for human consumption. Lead-free was defined at the time as having no more than 8.0% lead (note this 8.0% was lowered to 0.25% in 2014).

In 1996, the SDWA was further amended to state the following is unlawful:

1. For any person to introduce into commerce any pipe, pipe fitting, plumbing fitting or plumbing fixture, that is not lead free, except for a pipe that is used in manufacturing or industrial processing; or
2. Any person engaged in the business of selling plumbing supplies; except manufacturers, to sell solder or flux that is not lead free; or
3. Any person to introduce into commerce any solder or flux that is not lead free unless the solder or flux bears a prominent label stating that it is illegal to use the solder or flux in the installation or repair of any plumbing providing water for human consumption.

In 2011, SDWA Section 1417 was amended for the prohibition on use and introduction into commerce of lead pipes, solder and flux. These new requirements became effective on January 1, 2014. The amendments specifically modified the applicability of the prohibitions by creating exemptions for certain non-potable applications, changed the definition of "lead-free" by reducing lead content from 8% to a weighted average of not more than 0.25% in the wetted surface material (primarily affects brass/bronze), eliminated the provision that required certain products to comply with "voluntary" standards for lead leaching, and established a statutory requirement for calculating lead content.

The exemptions to the SDWA Section 1417 are pipes, pipe fittings, plumbing fittings or fixtures, including backflow preventers, which are used exclusively for non-potable services, such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where the water is not anticipated to be used for human consumption. The exemption also applies to toilets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower valves, service saddles, or water distribution main gate valves that are 2 inches in diameter or larger. In addition to the SDWA, the Community Fire Safety Act of 2013 exempted fire hydrants from this requirement.

As a result of these amendments, buildings constructed after 2014 are the least likely to have plumbing containing lead materials, so these consumers are at the lowest risk of exposure to lead from drinking water.

Because it is practically impossible to determine the lead content of an installed fixture, fitting or pipe, it should be assumed that the manufacture or installation date is the primary indicator of the lead content. Therefore, the characteristics of buildings and piping solder or fixtures would be **buildings in Ohio built prior to 1998 or that use plumbing material or solder manufactured before 1998 may have materials with greater than 8% lead and are at a higher risk of contributing lead to the drinking water than materials manufactured after 1998. In addition, buildings built and plumbing materials manufactured after 2014 were required to have less than 0.25% lead by weight and have the lowest risk for contributing lead to the drinking water. It should be noted however that, although prohibited, some use of leaded solder or leaded components may have occurred after the prohibitions became effective.**